

Laval théologique et philosophique



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Volume 45, numéro 1, février 1989

La Dogmatique de Gérard Siegwalt

URI : <https://id.erudit.org/iderudit/400427ar>

DOI : <https://doi.org/10.7202/400427ar>

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Éditeur(s)

Faculté de philosophie, Université Laval

ISSN

0023-9054 (imprimé)

1703-8804 (numérique)

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Citer cet article

Schall, J. V. (1989). Nature and Finality in Aristotle. *Laval théologique et philosophique*, 45(1), 73–85. <https://doi.org/10.7202/400427ar>

NATURE AND FINALITY IN ARISTOTLE

James V. SCHALL

RÉSUMÉ. — Dans la discussion de la nature et de la finalité chez Aristote, la philosophie politique notamment est impliquée directement. Ceci, en partie tout au moins, parce que la négation des notions aristotéliennes de nature humaine induit à penser que l'art et l'agir humains n'ont pas de limites qui leur soient imposées « par nature ». Tel est l'arrière-plan théorique de l'opinion selon laquelle l'univers lui-même est tout entier anthropocentrique. La politique ou l'action, dès lors, devient le substitut de la métaphysique ou de l'être. L'analyse d'Aristote des espèces de causes dans la nature, des espèces d'intelligence qui s'y révèlent et de leur rapport avec l'intelligence humaine, voilà qui fournit la base intellectuelle pour confiner la politique à ses limites, pour l'empêcher de devenir une science de ce qui est, sans autre présupposé que la volonté humaine.

SUMMARY. — Political philosophy in particular is directly related to the discussion of nature and finality in Aristotle. This is because, in part, at least, the denial of the Aristotelian notions of human nature, in particular, leads to the view that human art and human doing or action have no limits placed on them, "by nature". This is the theoretical background to the view that the universe itself is wholly "man-centered". Politics or action, then, becomes the substitute for metaphysics or being. Aristotle's analysis of the kinds of causes in nature, the kinds of intelligence revealed there and their subsequent relation to human intelligence, provide the intellectual basis for limiting politics to itself, for preventing it from becoming a science of what is, presupposed to nothing but the human will.

TO UNDERSTAND certain essential elements in political philosophy, it is first necessary to grasp several basic ideas and positions in Aristotle, the rejection of which in later modern philosophy set the stage for a theory of politics presupposed to no limits other than what man imposed on himself. To see the importance of this, we must consider Aristotle's notions of nature and finality, within the context of his notion of cognition. Aristotle's theory of intellection was based on abstraction from

sensible things. The mind had an active part to play in knowledge¹. The objects of knowledge, however, were themselves first made, first there, then known, so that the human mind, starting only with itself, its own powers, saw what was the intelligibility placed in things.

It is at this point that Aristotle's discussion of nature in the Second Book of the *Physics* and the Fifth Book of the *Metaphysics*, together with his discussion of the sciences in the First Book of the *de Partibus Animalium*, takes on immense significance. Aristotle's idea of "nature" was based on his view that the Prime Mover has a relationship to the rest of reality. This relationship is often underplayed in discussions of Aristotle, since Aristotle did seem to make the First Mover simply an object of contemplation. However, if this view were fully true, all the formal expositions Aristotle has on "nature" would become meaningless, as would be also missed the full significance of his idea that the First Mover moves as objects of love and knowledge move.

In Book XII of the *Metaphysics*, Aristotle discussed the "two ways the nature of the universe contains the good and the highest good, whether as something separate and by itself, or as the order of parts"². He answered this question by pointing out that both views contain some truth. The order of parts is intimately connected to the source of the universe, just as an army is related to its general. But the order of parts acquires its intelligibility from the leader. Or to state the same view somewhat negatively, without the "leader", there would be no order; and hence, in Aristotle's view, no parts either. The arm cut off from the body is not an arm at all³. Aristotle's own answer to the question just posed is as follows:

We must consider also in which of two ways the nature of the universe contains the good and the highest good, whether something separate and by itself, or as the order of parts. Probably in both ways, as an army does; for its good is found both in its order and in its leader, and more in the latter; for he does not depend on the order but it depends on him. And all things are ordered together somehow, but not all alike — both fishes and fowls and plants; and the world is not such that one thing has nothing to do with another, but they are all connected. For all are ordered together to one end, but it is as in a house, where the freemen are least at liberty to act at random, but all things or most things are already ordained for them, while the slaves and animals do little for the common good, and for the most part live at random; for this is the sort of principle that constitutes the nature of each⁴.

1. ARISTOTLE, *De Anima*, III, 5, 430a14-20, *Basic Works of Aristotle*, Edited by Richard McKeon, New York, Random House, 1941, p. 592. (Further citations will be from this edition). See also John Herman RANDALL, *Aristotle*, New York, Columbia University Press, 1960, pp. 89-101; Henry VEATCH, *Aristotle*, Bloomington, University of Indiana Press, 1974, pp. 76-79, 83-86; Charles N.R. MCCOY, *The Structure of Political Thought*, New York, McGraw-Hill, 1963, Chapters I and II.

2. Aristotle, *Metaphysics*, XII, 10, 1075a12-14, p. 885.

3. *Id.*

4. *Id.*, *Metaphysics*, XII, 10, 1075a12-23, pp. 855-86.

There is a most significant element in this passage. Aristotle had said that the highest good of the universe is contained in it in one sense as separate from it, and in another sense the good of the universe is contained in it as the order of parts which depend for their order on the leader. Next he dropped the analogy of the army and reverted to the "nature of the universe" to point out that "all things are ordered together somehow, but not alike".

All of this must mean that just as the order of parts in an army is placed in the parts by its leader, so the order of parts in the universe is placed there by its orderer. And, as if to make sure that we understand him, Aristotle explicitly said that he was referring to living things, "both fishes and fowls and plants", which are ordered to one another. Consequently, the world "is not such that one thing has nothing to do with another, but they are connected". Why are they connected? Because they are ordered "to one end", the extrinsic common good or goal. Aristotle used the example of a household to bring out this idea. In a household, freemen have a definite, responsible task to perform which is "already ordained for them". They contribute to the good of the household by this specific task which needs to be done. Servants and animals are also part of the household and are "freer" in a sense than the freemen because they cannot be trusted (Aristotle is not speaking pejoratively here, but stating a fact of experience) always to perform any really essential task in the household. Consequently, "they do little for the common good, and for the most part live at random". That is, their freedom in its very directionlessness is not intelligently related by their minds to the particular task of the household, because they do not see its end or purpose.

This passage indicates the essential insight into Aristotle's notion of freedom. For freedom is connected with purpose for a common end. Whatever lacks this sense of purpose is "free", that is, it can wander about aimlessly, but it does not contribute directly, except through an orderer, to the order of the common good as understood. Therefore, this random liberty, with no consciously internalized purpose as seen, is reprehensible, or at least less good, needing direction from outside itself if it is not to be destructive to itself or others. As a result, it is not a positive kind of freedom. Slaves or servants and animals, however, in Aristotle's view — remembering that a "slave" for him was an objective fact, that is, primarily someone not *causa sui*, someone who, for his own good, had to be positively cared for by someone with intelligence, say those in modern mental institutions who are wards of the state⁵ — had a nature that allowed for their random kind of activity. "I mean, for instance, that all must at least come to be dissolved in their elements, and there are other functions similarly in which all share for the good of the whole⁶." Thus, this type of random activity of animals, even though it does not fit into the order of the universe (or order of the household) as men do, that is, as responsible activity passing consciously through an intellect, nevertheless, it does contribute to the order of parts, which is the good of the whole. For the whole to be the whole, the parts must be the parts they are.

5. *Id.*, *Politics*, I, 4, 1254a15, p. 1131; I, 5, 1254b20-22, p. 1133.

6. *Id.*, *Metaphysics*, XII, 10, 1075a24-25, p. 886.

On this foundation, Aristotle was able to set down his theory of nature. In Book V of the *Metaphysics*, he defined nature as follows:

Nature in the primary and strict sense is the essence of things which have in themselves, as such, a source of movement; for the matter is called the nature because it is qualified to receive this, and processes of becoming and growing are called nature because they are movements proceeding from this. And nature in this sense is the source of the movement of natural objects, being present in them somehow, either potentially or in complete reality⁷.

Nature here is an attempt to recognize and define the fact that the “fishes and fowls and plants” which comprise part of the order of the universe and are interconnected have in themselves a natural source of motion such that they act always or for the most part in a definite manner, that is, as fishes and fowls and plants.

In Book II of the *Physics*, Aristotle further pointed out that “‘by nature’ the animals and their parts exist, and the plants and the simple bodies...”⁸. These things differ from the products of human art because products of art “... have no innate impulse to change”. Nature, then, “is a source or cause of being moved and of being at rest in that to which it belongs primarily...”⁹. Each natural thing is a “substance; for it is a subject, and nature always implies a subject in which it inheres”¹⁰. Nature can be used in several senses which always have to be clearly distinguished: the material substratum, the shape into which a thing grows, the efficient mover, and the “that for the sake of which” — the end¹¹.

Physics is distinguished from mathematics because the objects of mathematics have no natural movement or goal¹². Aristotle here incidently also pointed out that the Platonic forms are really mathematizations of physical objects. Consequently, they ignore motion which is essential to the natural world. “The beholders of the theory of Forms do the same (as the mathematicians), though they are not aware of it; for they separate the objects of physics, which are less separable than those of mathematics¹³.” Aristotle wished to indicate that natural living things display a finality in their process of growth. “But the nature is the end or ‘that for the sake of which’. For if a thing undergoes a continuous change and there is a stage which is the last, this last stage is the end or ‘that for the sake of which’¹⁴.”

Aristotle held, then, that in nature “somethings always come to pass in the same way, and others for the most part”. Moreover, “... some events are for the sake of something, others not. Again, some of the former class (that is, those for the sake of

7. *Ibid.*, V, 4, 1015a13–19, p. 756.

8. *Id.*, *Physics*, II, 1, 192b9–10, p. 236.

9. *Ibid.*, II, 1, 192b19, p. 236.

10. *Ibid.*, II, 1, 192b33–34, p. 236.

11. *Ibid.*, II, 3, 194b23–195a2, pp. 240–41.

12. *Ibid.*, II, 2, 193b33–34, p. 238.

13. *Ibid.*, II, 2, 193b35–37, p. 239.

14. *Ibid.*, II, 2, 194a28–30, p. 239.

something) are in accordance with deliberate intention, others not, but both are in the class of things which are for the sake of something"¹⁵. In this passage, Aristotle said that everything of nature happens for some end or purpose, even those things which are the acts of "deliberative reason", that is, acts of men. Thus he said, "events that are for the sake of something include whatever may be done as a result of thought or nature"¹⁶. Even chance events, as Aristotle went on to show, involve reason in some sense. He concluded, "Intelligent reflection, then, and chance are in the same sphere, for purpose implies intelligent reflection"¹⁷.

So far, then, the argument has been brought to this point: Aristotle held that things that happen regularly or for the most part reveal purpose. But he recognized also that the source of this purpose need not be the "rational deliberation" of the being acting. By this he meant to imply that the regular activity of animals reveals purpose, but not rational deliberation on their part. But it does reveal rational deliberation on somebody's part, "for purpose implies intelligent deliberation". As a result, Aristotle could not admit that everything happens by chance, because chance implies purpose and not mere chaos. "Spontaneity and chance, therefore, are posterior to intelligence and nature. Hence, however true it may be that the heavens are due to spontaneity, it will still be true that intelligence and nature will be prior causes of this all and of many things in it besides"¹⁸. Aristotle, therefore, wanted to show why "nature belongs to the class of causes which act for the sake of something". In other words, he wanted to show that nature reveals a directing intelligence since it displays order and, as was evident from the discussion of the *Metaphysics*, order implies a relationship to an extrinsic cause¹⁹.

Aristotle next faced an argument that is almost modern. "Why should not nature work, not for the sake of something, nor because it is better so, but just as the sky rains, not in order to make the corn grow, but of necessity²⁰?" Why should not teeth, for example, come up of necessity? Why is it necessary to suppose that their peculiar regular arrangement implies order? Why could not the organization or order be spontaneous, the survival of the fittest? Aristotle thought that "it is impossible that this should be the true view"²¹. Why? "For teeth and all other natural things either invariably or normally come about in a given way; but of not one of the results of chance or spontaneity is this true²²." There is purpose revealed here. Consequently,

15. *Ibid.*, II, 5, 196b10-11, p. 244.

16. *Ibid.*, II, 5, 196b17-20, p. 244.

17. *Ibid.*, II, 5, 197a7, p. 245.

18. *Ibid.*, II, 6, 198a9-12, p. 247.

19. *Id.*, *Metaphysics*, XII, 10, 1075a12-23, pp. 885-86.

20. *Id.*, *Physics*, II, 8, 198b17-19, p. 249.

21. *Ibid.*, II, 8, 198b20-35, p. 249.

22. *Ibid.*, II, 1, 198b35-37, p. 249.

action for an end is present in things which come to be and are by nature. Further, where a series has a completion (that is, "it is not any chance thing that comes from a given seed but an olive from one kind and a man from another..."²³), all preceding steps are for the sake of that. Now surely as in intelligent action, so in nature; and as in nature, so it is in each action, if nothing interferes. Now intelligent action is for the sake of an end; therefore the nature of things also is so²⁴.

Nature is for an end in the same way as artifacts are for an end. Indeed, art imitates nature in this respect that it attempts to understand the order of nature so that it can reproduce by art its own creations, just as nature produces its own objects.

We can see how nature acts more clearly if we look to "animals rather than men: they make things neither by art nor after inquiring or deliberation"²⁵. Even plants as well as "spiders, ants, or the like" show that something is produced for an end — "leaves, e.g. grow to provide shade for the fruit"²⁶. Nature, therefore, produces all things for an end. "And since 'nature' means two things: the matter and the form, of which the latter is the end, and since all the rest is for the sake of the end, the form must be the cause in the sense of 'that for the sake of which'²⁷." Mistakes in nature, monstrosities, simply argue to some attempt at purpose which was not attained just as in art mistakes are possible. Natural things are those which "by a continuous movement originated from an internal principle arriving at some completion: the same completion is not reached by every principle; nor any chance completion, but always the tendency in each is toward the same end, if there is no impediment"²⁸. Therefore, there is order in the processes of natural things. "But when an event takes place always or for the most part, it is not incidental or by chance. In natural products the sequence is invariable, if there is no impediment²⁹."

Yet, this stress on order and finality in nature is of little value until there is a grasp of what kind of necessity this finality of nature implies. Aristotle held that material *praesupposita* to the existence of a form, that is, stones and walls for a house, while necessary, are not to be considered the reasons why the effect, the house, is produced.

Whereas, though the wall does not come to be without these, it is not due to these except as its material cause: it comes to be for the sake of sheltering and guarding certain things. Similarly, in all other things which involve production for an end (men, animals, plants, etc.), the product cannot come to be without things which have a necessary nature, but is not due to these (except as its material); it comes to be for an end³⁰.

23. *Ibid.*, II, 4, 196a31–33, p. 244.

24. *Ibid.*, II, 8, 199a6–12, p. 249–50.

25. *Ibid.*, II, 8, 199a21–22, p. 250.

26. *Ibid.*, II, 8, 199a23–26, p. 250.

27. *Ibid.*, II, 8, 199a30–33, p. 250.

28. *Ibid.*, II, 8, 199b16–19, p. 251.

29. *Ibid.*, II, 8, 199b23–25, p. 251.

30. *Ibid.*, II, 9, 200a5–10, p. 251.

The necessity in nature, then, is one of *supposition of the end*. Someone, the extrinsic common good, is the cause “for the sake of which” all things come to be what they are. But they are what they are solely because this cause wanted them to be what they are. The internal cause, the form, causing them to be a this rather than a that, itself requires this explanation of why it is what it is in fact. The necessity of nature, therefore, does not exist by simple necessity.

Aristotle, in an important analogy, compared the “necessity in mathematics” to “necessity in things which come to be through the operation of nature”³¹. This seems strange at first sight, since we should have expected the opposite, that is, that the necessity of things which “come to be by the operation of nature”, which is one of hypothesis, would be different from the necessity of mathematics, which implies simple necessity. However, the fact that Aristotle compared the ends of all nature, including human, to the necessity of mathematical principles rather than to the hypothetical necessity of the ends of art is one of the most important ideas in Aristotle and of great significance to later philosophy. Like mathematics, the starting point is compared to the ends of natures which act for a purpose. Therefore, if the end is not present, neither will be the material principles which go to make it up of necessity be present.

If there is to be a house, such-and-such things must be made or be there already or exist, or generally the matter relative to the end, bricks and stones, if it is to be a house. But the end is not due to these except as the matter, nor will it come to be because of them³².

Therefore, bricks and stones are necessary for the house to be, but the house, the end, is only present because someone chose it and knows what a house is.

In the *Ethics*, Aristotle brought out more clearly the implications of this position. For as far as men are concerned, the types of forms that do exist in nature — men, animals, plants — have final causes that are compared to mathematical axioms, as data which cannot be otherwise. But as far as the Extrinsic First Mover is concerned, they are not necessary, but willed, they could be otherwise, just as an artist can choose any end and form in which to embody it.

For virtue and vice respectively preserve and destroy the first principles, and in actions the final cause is the first principle, as the hypotheses are in mathematics; neither in that case is it argument that teaches the first principles, nor is it so here...³³.

Therefore, men are not free in morals and politics to change the natural ends of their nature and whatever is needed to support these ends — family, marriage, state, tendency to happiness. These ends are part of human nature *ex suppositione finis*, the end of the Prime Mover, not the end of the human agent. Freedom consists in discovering this end or form and living according to it as what is.

31. *Ibid.*, II, 9, 200a15-16, p. 252.

32. *Ibid.*, II, 9, 200a24-28, p. 252.

33. *Id.*, *Nicomachean Ethics*, VII, 8, 1151a15-18, p. 1050.

The natural distinction in things, then, the differences in capacity and grade of being are to be considered not as exclusively the results of fault or injustice. They are results of the activity of the First Mover in guiding all things to his (and their) own end, in seeing that being is better when it manifests itself in the abundance of a great variety of possible beings having come into existence rather than in a parsimonious few. When, therefore, man rebels against the rule of reason over the passions, or against the family, or society, he rebels, in Aristotle's view, against the order of nature, which is in nature as a result of the decision of the First Mover³⁴. It is for this reason that, later on, Marx will maintain that Aristotle "alienated" man from himself by imposing a God as the reason for the distinction in things.

One further treatise in Aristotle should be discussed in this context, the extremely important initial chapters of the *de Partibus Animalium*, in which he treated of nature and its relation to art and experimental science. Again Aristotle pointed out that the necessity in nature is a hypothetical necessity, not an absolute one.

For there is absolute necessity, manifested in eternal phenomena; and there is hypothetical necessity, manifested in everything that is generated by nature as in everything that is produced by art, be it a house or what it may. For if a house or other such final object is to be realized, it is necessary that such and such material shall exist; and it is necessary that first this and then that shall be produced, and first this and then that set in motion, and so on in continuous succession until the end and final result is reached, for the sake of which each prior thing is produced and exists. As with these productions of art, so also is it with the productions of nature³⁵.

In the theoretical sciences, the starting point is that "which is"; in the productive sciences it is "that which is to be". Thus, if a man or health is yet to be, this necessitates certain other antecedents. The mere existence of these antecedents does not, however, necessitate the man or health; rather the reverse is true, the end, that is, the man or the health, necessitates the antecedents³⁶.

Aristotle's philosophy here admits of a "material evolution" in the sense that material antecedents necessary for the existence and coming to be of an existent being may be and, in fact, are usually prior to the ultimate form which is to be substantially. But this does not imply that material antecedents can be taken by themselves; they are always for the sake of something else. "For the process of evolution is for the sake of the thing finally evolved, and not for the sake of the process³⁷." Finality is always present in Aristotle. This very fact is why he propounds his famous doctrine that the logical order and the real order develop in reverse to one another.

34. *Id.*, *Metaphysics*, I, 2, 982b27-30, p. 692.

35. *Id.*, *Parts of Animals*, I, 1, 639b24-33, pp. 644-45.

36. "The mode of necessity, however, and the mode of ratiocination are different in natural science from what they are in the theoretical sciences; of which we have spoken elsewhere. For in the latter the starting point is that which is; in the former that which is to be. For it is that which is yet to be — health, let us say, or a man — that, owing to its being of such and such characters, necessitates the pre-existence or previous production of this and that antecedent; and not this or that antecedent which, because it exists or has been generated, makes it necessary that health or a man is in, or shall come into, existence." *Ibid.*, I, 1, 639b33-640a7, p. 645.

37. *Ibid.*, I, 1, 640a18, p. 645.

Now the order of actual development and the order of logical existence are always in inverse of each other. For that which is posterior in the order of development is antecedent in the order of nature, and that is genetically last which in nature is first ³⁸.

But lest the full implications of this whole doctrine be missed, it should be pointed out that for Aristotle, the intelligible order in the universe which guides, as it were, the material evolution is not simply "logical", but is real in the First Act. "Actual knowledge is identical with its object ; potential knowledge in the individual is in time prior to actual knowledge but in the universe it has no priority even in time ; for all things that come into being arise from what actually is ³⁹."

It is due to this consciousness of a type of artistic order that, as we have suggested, Aristotle compares artistic works to the works of nature. "Art indeed consists in the conception of the result to be produced before its realization in matter ⁴⁰." Nature, too, then is preconceived, but not by man. For there to be a man, there need to be certain antecedents in nature, and for man to exist in a more suitable way, other antecedents are required.

The fittest mode, then, of treatment is to say a man has such and such parts, because the conception of man includes their presence, and because they are necessary conditions of his existence, or, if we cannot quite say this, which would be best of all, then the next thing to it, namely, that it is either quite impossible for him to exist without them, or, at any rate, that it is better for him that they should be there and their existence involves the existence of other antecedents. This we should say, because man is an animal with such and such characters, therefore is the process of his development necessarily such as it is ; and therefore is it accomplished in such and such an order, this part being formed first, that next, and so on in succession ; and after a like fashion should we explain the evolution of all other works of nature ⁴¹.

For Aristotle, then, nature produces gradations of conditions and existents ranging from the absolutely necessary to the most fitting and pleasant. All is not one and monolithic.

Aristotle pointed out that no "abstraction can form a subject of natural science, seeing that everything that nature makes is means to an end" ⁴². This fact of an actual striving is the one factor that is always present in nature. The "holders of the theory of Forms", though they are not aware of it, really abstract from motion just like the mathematician, but this abstraction from motion is what prevents them from seeing the real world where motion is present ⁴³. Aristotle then sat down the key passage

38. *Ibid.*, II, 1, 646a25-27, p. 659.

39. *Id.*, *De Anima*, III, 7, 431a1-4, p. 593.

40. *Id.*, *Parts of Animals*, I, 1, 640a32, p. 646.

41. *Ibid.*, I, 1, 640a34-b4, p. 646.

42. *Ibid.*, I, 1, 641b10-12, p. 649.

43. *Id.*, *Physics*, II, 2, 193b35-194a5, p. 239.

which related, in one brief statement, all we have been stressing about the relation of nature, the Extrinsic Mover, hypothetical necessity, and art :

For just as human creations are products of art, so living objects are manifestly the products of an analogous cause or principle, not external but internal, derived like the hot and the cold from the environing universe. And that the heaven, if it had an origin, was evolved and is maintained by such a cause...⁴⁴.

Why? Because "order and definiteness are much more plainly manifested in the celestial bodies than in our own frame..."⁴⁵. These remarks of Aristotle, taken in the total line of argument thus far presented, are an extremely important corrective for anyone who is overly ready to eliminate the possibility of creation from Aristotle's thought in the sense of it being necessarily contradictory to it. Perhaps the reason cannot "prove" creation, perhaps Aristotle needed an eternal succession of existents to ground his forms, but in this passage he did suggest the possibility of the origin of the universe from a cause which stands to the universe as the human artist to the work of art, that is, as creator of the ends and means of the created product, which then continues to exist in its own right with its own capacities. In this sense, too, Aristotle's analogy of the army and its leader as applied to the universe takes on its most profound significance.

This line of argument becomes more pertinent in the light of the following passage : "It is impossible that any abstraction can form a subject of a natural science, seeing that everything that nature makes is means to an end"⁴⁶. Aristotle said that some philosophers maintained that there is order in nature, to be sure, but that the universe as such was a product of "chance and spontaneity". This heaven, he exclaimed, "in which not the faintest sign of haphazard or of disorder is discernible!"⁴⁷. Why cannot this theory of chance creation be held? Because nature is not an abstraction. It is a moving, vital process that actually is occurring in a definite manner. "A given germ does not give rise to any chance living being, nor spring from any chance one; but each germ springs from a definite parent and gives rise to a definite progeny"⁴⁸. These facts lead to the philosophical conclusion that

whenever there is plainly some final end, to which a motion tends should nothing stand in the way, we always say that such final end is the aim or purpose of the motion; and from this it is evident that there must be something or other really existing, corresponding to what we call by the name of Nature⁴⁹.

Aristotle was very empirical here. He did discover a definite order in nature as revealed by the definite growth and decay of living things. This order is not an imagined one, but it really does happen. Therefore, he insisted nature is not an abstraction, nor is its order.

44. *Id.*, *Parts of Animals*, I, 1, 641b12-17, p. 649.

45. *Ibid.*, I, 1, 641b19, p. 649.

46. *Ibid.*, I, 1, 641b10, p. 649.

47. *Ibid.*, I, 1, 641b24, p. 649.

48. *Ibid.*, I, 1, 641b28-29, p. 649.

49. *Ibid.*, I, 1, 641b24-28, p. 649.

From this, Aristotle proceeded to a further discussion of the status of natural causes. He concluded that they have a "hypothetical necessity", not an absolute one. If nature is to be, then certain things are required. But there is no need for nature to be. Someone had to first desire an end. Aristotle, therefore, insisted that hypothetical necessity, absolute necessity, and final end be distinguished. Final end, to be attained, may indeed require the absolute necessity of certain other factors. For if there is to be a man, he must have flesh and bones. But the final end itself can be hypothetical. Thus the elements required for its achievement will in that event also be hypothetical. Absolute necessity, taken strictly, refers to inherent interconnections — that is, man has to be rational, plants have to be non-sentient.

By necessity we shall sometimes mean hypothetical necessity, the necessity, that is, that the requisite antecedents shall be there, if the final end is to be reached ; and sometimes absolute necessity, such necessity as that which connects substances and their inherent properties and characters⁵⁰.

Thus, it should be noted that a substance, a man or a dog, may be hypothetical, that is, need not be, but what-a-man-is has certain necessary properties even though such a thing as a man or dog never was.

The ends of nature with respect to man *are fixed*, made, not *to be made*. Man is not free to change them and still be man. Consequently, man's position with respect to nature is not the relationship of maker. If there is intelligibility in nature, it is already there, man finds it ; he does not make it. But the intelligent creature's discovery of his own being ought to be exhilarating to him, the discovery that he is, after all, well made, better than he could hope to do himself. The philosophic or theoretical sciences for Aristotle are based on this viewpoint. But this does not mean that Aristotle intended to say that man could not gain some knowledge of nature after the manner of a maker. Quite the contrary, experimental science does not, as theoretic science, come to necessary conclusions about the substance of things. Indeed, most of what is known arises from experimental analyses which do not produce necessary conclusions, but possible ones.

This is why we can propose a different structure for man, even though we are bound — and bound in the sense in which we are "bound" to the primary movement of the First Mover⁵¹ — by his actual theoretic structure given by nature which man did not make. There is, for instance, no apparent reason for the practically invariable connection in nature between man and two-footedness or five-fingeredness. Yet man as he comes from nature does possess these characteristics for the most part. Why? Aristotle felt that an examination of all the varieties of animals, no matter how revolting or strange they might seem, would shed some light on such problems because it would reveal "to intellectual perception the artistic spirit that designed them, give immense pleasure to all who can trace links of causation, and are inclined to philosophy"⁵².

50. *Ibid.*, I, 1, 642a33-34, p. 651.

51. *Id.*, *Metaphysics*, XII, 7, 1072b4.

52. *Id.*, *Parts of Animals*, I, 5, 645a9-11, p. 657.

Aristotle thus thought that artistic representations of nature by man were to be appreciated, but even more so the "original realities themselves" should be "more interesting, to all at any rate who have eyes to discern the reasons that determined their formation"⁵³. The experimental scientist can, therefore, by his careful analysis of what actually happens in nature approach the mentality of nature's originator. He will discover "absence of haphazard and conduciveness of everything to an end are to be found in nature's works in the highest degree..."⁵⁴. Moreover, he will also find that the "principle object of natural philosophy is not the material elements but their composition, and the totality of forms, independently of which they have no existence"⁵⁵. The experimental scientist, as later philosophy will clearly reveal, tends to look upon reality after the manner of a maker, rather than after the manner of a philosopher who looks at it as having been formed, to seek the causes of its being what and such as it is. From this attitude, it is but a short step for the modern philosopher, following modern experimental science, by denying to nature an intelligibility placed there by nature's cause, to look on natural things as completely malleable or formable, as something that he makes and constructs by his own intellect, presupposed to no fixed nature or form, either in natural or especially rational creatures.

The significance of the foregoing discussion of Aristotle's view of nature lies in the fact that it is one of the recurring issues that lie at the foundations of modern political theory, which underlies most contemporary problems in both theology and metaphysics⁵⁶. The medievals, Albertus Magnus and Thomas Aquinas, were still able to understand and interpret Aristotle because, as Christians, they could accept these foundations. However, beginning with Stoicism, Epicureanism, and Cynicism, but especially with the revival of these philosophies in the Seventeenth Century, practically all modern political theory from Machiavelli, Descartes, Hobbes, Grotius, Rousseau, Hume, Kant, Hegel, and Marx became an attempt to reverse the implications of Aristotle's view⁵⁷.

Modern political theory, in Marx's phrase, is a gradual, progressive attempt to "hominize" nature, that is, to remove the need for a First Cause or Divinity from nature and substitute man himself as the prime cause of the distinction of things. Marx was to accuse Aristotle of inaugurating the primary alienation of man from himself because Aristotle recognized that the natural ends of nature were caused to be what they were by the First Mover, not by man himself. For Marx, this was an alienation,

53. *Ibid.*, I, 5, 645a14-15, p. 656.

54. *Ibid.*, I, 5, 645a23-25, p. 657.

55. *Ibid.*, I, 5, 645a25-37, p. 657.

56. See James V. SCHALL, "Political Theory and Political Theology", *Laval Théologique et Philosophique* 31 (1975), pp. 25-48; "Political Philosophy and Christianity", *Center Journal*, Fall 1983, pp. 47-66; "Reason, Revelation, and Politics: Catholic Reflections on Strauss", *Gregorianum* 2 (pp. 349-65) and 3 (pp. 469-97); "The Supernatural Destiny of Man", *Modern Age*, Fall 1982, pp. 411-15; "Metaphysics, Theology, and Political Theory", *Political Science Reviewer*, Fall 1981, pp. 1-25.

57. See James V. SCHALL, "Post-Aristotelian Philosophy and Political Theory", *Cithara*, November 1963, pp. 56-79; "The Reality of Society in St. Thomas", *Divus Thomas* 1 (1980), pp. 13-23; *Christianity and Politics*, Boston, St. Paul Editions, 1981; and "St. Thomas Aquinas Review", *Teaching Political Science*, Summer 1983, pp. 195-98. See also, McCoy, *ibid.*, Charter III.

something imposed on man, not chosen by him and therefore intolerable. Man had to show his independence by overturning these natural ends — family, state, virtue — so he could be for and by himself alone. But Aristotle could accept the limitations man discovered in his nature. Aristotle, in other words, could let man be man and therefore let politics be politics and not some spurious metaphysics which derived no norms or values in man except what man, usually the most powerful man, the collective polis itself, put there. The struggle for politics remains at bottom a struggle about metaphysics and its openness to intelligibility, from whatever the source.